

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFAg | Central Chilterns

Landscape report (LV-001-009)

Landscape and visual assessment

November 2013

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Department
for Transport

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High Speed Two (HS2) Limited,
Eland House,
Bressenden Place,
London SW1E 5DU

Details of how to obtain further copies are available from HS2 Ltd.

Telephone: 020 7944 4908

General email enquiries: HS2enquiries@hs2.org.uk

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1 Introduction

- 1.1.1
- The landscape and visual appendix for the Central Chilterns forum area (CFAg) comprises:
 - a summary of engagement with technical stakeholders (Part 1);
 - an environmental baseline report (Part 2);
 - assessment matrices (Part 3); and
 - a schedule of not significant effects (Part 4).
- 1.1.2
- Maps referred to throughout the landscape and visual appendix are contained in the Volume 5, Landscape and Visual Map Book.

Part 1 Engagement with technical stakeholders

1 Introduction

1.1.1 This Section describes engagement that has been undertaken with technical stakeholders in relation to the landscape and visual assessment for CFA 9.

Table 1: Stakeholder engagement

Stakeholder	Comment	Response
Chiltern Conservation Board July 2012	Stakeholder letter issued 31 July 2012. Meeting held to discuss viewpoints 29 August 2012. Response received suggesting additional viewpoints and photomontages. See below for suggested locations. <ul style="list-style-type: none">South Bucks WayMantle’s WoodThe Hyde at Hyde EndView of cutting – not added is directly on line of route/ building is demolished.Cudsdens FarmMissenden Abbey – no viewFootpaths south of Potter RowBury farm and footpathPotter RowKings Lane Meeting held to discuss the draft Environmental Statement (ES) 19 June 2013.	Suggested viewpoints have been assessed and where applicable has been added to the baseline.
Buckinghamshire County Council August 2012	Stakeholder letter issued 15 August 2012. Meeting held to discuss the draft ES 19 June 2013. Buckinghamshire County Council responded 24 October 2012 on behalf of Chiltern District Council with comments/areas of interest and additional viewpoints. <ul style="list-style-type: none">The Hyde at Hyde End, south of Chesham Road, Hyde HeathBury Farm, west of AmershamJenkins Wood (photomontage requested)Footpath south-east of Jenkins Wood (photomontage requested)Footpath south of Potters RowKing’s Lane, Great Missenden (photomontage requested)South Bucks Way, east of Little MissendenView of cutting, south of Pednor Road, CheshamPotter Row, Great MissendenMissenden Abbey, London Road, Great Missenden	Proceed with viewpoints as sent out to consultation with modifications resulting from feedback and from site survey.

	<ul style="list-style-type: none">Cudsden Farm, north Pednor Road, Chesham	
Hertfordshire County Council	Stakeholder letter issued 13 September 2012.	
September 2012	No response at this point.	
Natural England (NE)	NE responded to initial consultation 25 September 2012.	Comment taken into consideration.
September 2012	NE encouraged the local authorities to comment on viewpoints in their local communities and landscapes that are important to them.	
	Meeting held to discuss the draft ES 19 June 2013.	
Chilterns District Council (ChDC)	Stakeholder letter issued 9 October 2012.	Proceed with viewpoints as sent out to consultation with minor modifications resulting from feedback and from site survey.
October 2012	Response via Buckinghamshire County Council.	
	Meeting held to discuss the draft ES 19 June 2013.	

Part 2 Environmental baseline report

1 Introduction

- 1.1.1
- This Section describes the baseline for landscape character areas (LCA) and visual assessment viewpoints located within the Central Chilterns study area. A summary of the landscape and visual baseline is provided in Volume 2, CFA Report 9, Central Chilterns, Section 9. The LCA maps LV-02-32b to LV-02-035a (Volume 5, Landscape and Visual Assessment Map Book), which are based on an aerial photograph, also help to provide an overview of the character of the area, illustrating the pattern of development, distribution of open spaces and spread of vegetation.
- 1.1.2
- This Section is organised as follows:
 - information on each LCA identified within the study area, including a description of the area and an analysis of the condition, tranquillity, value and sensitivity of each LCA. These are ordered from south to north along the route of the Proposed Scheme;
 - information on the nature of the existing views towards the Proposed Scheme from identified representative visual assessment viewpoints, during both winter and summer, and day time and night-time where relevant. These are ordered from south to north along the route of the Proposed Scheme; and
 - future baseline conditions are also described.

2 Landscape character assessment

- 2.1.1
- The LCA have been determined with reference to a number of published studies, at the national, county and local level. Those of relevance to the study area are described below:
 - The Natural England National Character Area 110¹: Chilterns, which summarises the area as extensively wooded and farmed Chilterns landscape is underlain by chalk bedrock that rises up from the London basin to form a north-west facing escarpment offering long views over the adjacent vales;
 - Buckinghamshire Landscape Character Assessment²; which is divided into zones;
 - Chiltern District Landscape Character Assessment³, which divides the district into 18 character areas six of which are included in the assessment; and
 - The Chilterns AONB Management Plan 2008 – 2013⁴, which outlines the global, national and regional context of the area of outstanding natural beauty (AONB) and the area’s special qualities, and the Changing Landscape of Chilterns⁵, which outlines the findings of the Chilterns historic landscape characterisation project.
- 2.1.2
- Descriptions of all the LCA identified within the study area are provided below. The LCA are shown on Maps LV-02-32b to LV-02-35a (Volume 5, Landscape and Visual Assessment Map Book). A summary description of the LCA most likely to be affected is included in Volume 2 CFA Report 9, Section 9.
- 2.1.3
- Where LCA are located across boundaries between other CFA (i.e. CFA 8 The Chalfonts and Amersham, and CFA 9 Central Chilterns), the baseline descriptions for these LCA are reported in each CFA section in their entirety.

¹ Natural England (2013), *National Character Area 110 Chilterns*. <http://publications.naturalengland.org.uk/file/5025215>; Accessed 27 September

² Buckinghamshire County Council (2001), *Landscape Plan for Buckinghamshire Part 1: Landscape Character Assessment*

³ Land Use Consultants, (2011), *Chiltern District Landscape Character Assessment: Prepared for Buckinghamshire County Council and Chiltern District Council*.

⁴ Chilterns Conservation Board (2008), *Chilterns Area of Outstanding Natural Beauty Management Plan 2008 – 2013’ A Framework for Action*

⁵ Chilterns Conservation Board (2009), *The Changing Landscape of the Chilterns’ Chilterns Historic Landscape Characterisation Project*

Misbourne Upper North LCA

This LCA follows a shallow, gently sloping chalk valley, with rolling valley sides and relatively flat bottomed floodplain of the River Misbourne. The valley is mainly rural in character but includes the key settlements of Little Missenden and Great Missenden. There are numerous woodland blocks including ancient and semi natural woodland scattered throughout upper slopes. Non-wooded valley sides are largely in intensive arable production. Fields are typically medium to large, regular in shape, bounded by strong hedgerows which highlight the folds in the landform and create a cohesive pattern. The valley contains the narrow and gently flowing River Misbourne, the A413 Amersham Road and the Marylebone to Aylesbury Line running along its base and narrow winding roads with strong hedgerows running up the valley slopes.

Landscape condition

The landscape consists of arable fields, pasture and woodland with the majority of tree cover classified as ancient woodland, which appears relatively well maintained. Missenden Abbey has well managed gardens. The LCA is within the Chilterns AONB and contains frequent grand country properties. The LCA is considered to be in good condition.

Tranquillity

The LCA is within a dry valley and is predominantly rural and wooded creating areas of isolation and seclusion. There are, however, the transport routes of the A413 Amersham Road and the Marylebone to Aylesbury Line that runs along the valley bottom, as well as the pylons which traverse the skyline, the tranquillity level is considered to be medium.

Landscape value

A well-used network of public rights of way (PRoW) provides access into this LCA including The South Bucks Way. The Misbourne Upper North LCA is within green belt and the Chilterns AONB and therefore is valued at national level.

Sensitivity

Due to the good landscape condition, medium tranquillity and national value this LCA has a high sensitivity to change.

Figure 1: Misbourne Upper North LCA Date taken: 23 August 2012. Nikon D3200 50mm lens



Penn North LCA

The dip slope of the Chilterns is incised by numerous dry valleys creating a characteristic pattern of valleys and ridges. In this small area farming is dominant, scattered with individual properties and the hamlet of Mop End. Large areas of woodland form enclosure, whilst narrow winding rural roads rise up the valley side from the A413 Amersham Road. A dense network of PRow crosses the LCA in this location.

Landscape condition

Small settlements are surrounded by well managed pasture with ancient woodland and some areas of arable land. The landscape is assessed as being of good condition.

Tranquillity

The landscape comprises agricultural fields and large parcels of woodland. There are also small settlements and individual properties with only one A road, the A404, passing along the southern edge of the LCA landscape. As such the area has a medium level of tranquillity.

Landscape value

The Penn North LCA is within green belt and the Chilterns AONB and has numerous PRow crossing the landscape. Overall it is valued at national level.

Sensitivity

The overall landscape condition is assessed as good, the tranquillity level is considered to be medium and the value is of national importance. Overall, the LCA is considered to be of high sensitivity to change.

Figure 2: Penn North LCA Date taken: 21 August 2012. Nikon D3200 50mm lens



Hyde Heath North LCA

This LCA is predominantly on a plateau adjacent to the Misbourne Valley. There is a mixture of larger arable fields and smaller pastoral fields with dense hedgerows with intermittent trees.

The main settlements are South Heath and Hyde Heath set amongst farmland and areas of extensive woodland.

Other than in the more urban areas to the south the road network comprises interconnecting narrow winding country roads and tracks which connect the smaller settlements and individual farms.

Landscape condition

The LCA predominantly consists of the villages of Hyde Heath and South Heath and several other small settlements and farmsteads. The surrounding agricultural landscapes of pasture and arable fields are relatively well managed. The landscape is assessed as being of fair condition.

Tranquillity

The village settlements of South Heath and Hyde Heath are set within predominantly agricultural land and woodland. Within the large remote fields there are relatively isolated areas within the intensely farmed landscape. The arable field patterns are large scale with areas of woodland between creating areas of enclosure. The small local roads are lightly trafficked. These factors consequently result in the tranquillity level is being considered to be medium.

Landscape value

Although this LCA is predominantly urban, the Hyde Heath North LCA lies within green belt and the Chilterns AONB and is therefore valued at national level.

Sensitivity

Due to the fair condition, medium tranquillity and national value of the landscape, this LCA is considered to have a high sensitivity to change.

Figure 3: Hyde Heath North LCA Date taken: 21 August 2012 Nikon D3200 50mm lens



Bellingdon LCA

The dip slope of the Chilterns is incised by numerous dry valleys creating the characteristic landscape pattern of valleys and ridges. In this LCA, the dry valleys converge on the settlement of Chesham located in the valley bottom.

The land use is predominantly arable and pasture with valley sides bounded on its upper slopes by woodland, some of which is ancient. Other field boundaries consist of poorly defined hedgerows. Field patterns follow the contours of the land and are irregular becoming smaller close to settlements.

Landscape condition

The LCA is predominantly within the Chilterns AONB and consists of numerous dry valley slopes which converge on the settlement of Chesham. The agricultural fields, hedgerows and woodland are well maintained and therefore the landscape is assessed as being of good condition.

Tranquillity

Whilst the LCA is mostly rural, a proportion of the LCA is made up of the settlement of Chesham. There is a presence of woodland cover and wooded skylines creating areas of seclusion. The roads which run along the valleys vary in size and levels of traffic. Consequently, the tranquillity level is considered to be medium.

Landscape value

The Bellingdon LCA lies within green belt and the Chilterns AONB. The landscape is traversed by numerous PRow including Herberts Hole. The LCA is considered to be valued at national level.

Sensitivity

Due to the good condition, medium tranquillity and national value of the landscape, this LCA is considered to have a high sensitivity to change.

Figure 4: Bellingdon LCA Date taken: 23 August 2012. Nikon D3200 50mm lens



Great Kingshill North LCA

The LCA lies predominantly on an elevated undulating plateau, adjacent to Misbourne Valley. The fields are a mosaic of arable fields and smaller rough grazing and paddocks with dense hedgerows and intermittent trees. Hedgerows and post and rail fences form field boundaries. The LCA contains blocks of woodland, some of which are ancient.

The main settlements are Prestwood, Great Kingshill and Hazlemere on the northern and southern edges of the LCA. The LCA is partially within the Chilterns AONB. Other smaller settlements are scattered throughout the LCA and linked by rural roads that traverse the landscape.

Landscape condition

The agricultural fields are well managed and the dense hedgerows and intermittent trees are in good condition. The overall landscape condition is assessed as fair.

Tranquillity

The numerous settlements are interconnected by many roads including the A4128. Other than the main settlements the predominantly agricultural landscape with pockets of woodland creates areas of seclusion. Given the land cover and level of enclosure, the tranquillity level is considered to be medium.

Landscape value

The landscape is traversed by numerous PRoW. Great Kingshill North LCA is within green belt and the Chilterns AONB and therefore valued at national level.

Sensitivity

Due to the fair condition, medium tranquillity and the national value of the landscape, this LCA has a high sensitivity to change.

Figure 5: Great Kingshill North LCA Date taken: 4 February 2012. Canon EOS 350D 50mm lens



Lee and Buckland Common Farmland LCA

The topography is defined by an elevated and undulating plateau. Numerous narrow winding roads, tracks and PRoW traverse the landscape creating a complex network between farmstead and hamlets.

The landscape pattern is a mix of larger arable fields and smaller pasture fields bounded by dense hedgerows with intermittent trees. To the north-west, larger blocks of woodland cover the steeper hillsides within the landscape. The LCA is within the Chilterns AONB.

Landscape condition

The agricultural fields, dense hedgerows and intermittent trees and woodland are relatively well maintained. It is assessed as being of fair condition.

Tranquillity

The LCA consists of low density settlements of small hamlets and farms within agricultural land with small areas of woodland creating a degree of seclusion. Although there is a presence of pylons within the LCA. Hedgebanks and tall hedgerows enclose rural roads. Therefore the tranquillity of the area is considered to be medium.

Landscape value

The LCA is within green belt and the Chilterns AONB and crossed by numerous PRoW. Therefore the area is valued at national level.

Sensitivity

Due to the fair condition, medium tranquillity and national value of the landscape, this LCA has a high sensitivity to change.

Figure 6: Lee and Buckland Common Farmland LCA Date taken: 14 June 2013. Nikon D3200 50mm lens



3 Visual baseline

- 3.1.1 Descriptions of the identified representative viewpoints are provided below. The viewpoints are shown on Maps LV-07-32b to LV-07-35a and LV-08-32b to LV-08-35a (Volume 5, Landscape and Visual Assessment Map Book). For each viewpoint, the first part of the baseline description relates to the view during winter, the second part relates to the summer view for viewpoints considered in the operational assessment and, where relevant, the third part relates to the view at night-time.
- 3.1.2 Photographs have been included to represent the view from visual receptors during winter and, where relevant, summer. For some visual receptors, no appropriate location from which to capture a representative photograph of the view was available, therefore no photograph has been included and the assessment has been undertaken based on professional judgement.
- 3.1.3 The number identifies the viewpoint locations which are shown on Maps LV-07-32b to LV-07-35a and LV-08-32b to LV-08-35a (Volume 5, Landscape and Visual Assessment Map Book). In each case, the middle number (xxx.x.xxx) identifies the type of receptor as follows:
 - 1. protected views - None of these receptor types have been identified within the study area;
 - 2. residential views - These have a high sensitivity to change, as attention is often focused on the landscape surrounding the property, rather than on another focused activity (as will be the case in predominantly employment or industrial areas);
 - 3. recreational views - These receptors (apart from those engaged in active sports) generally have a high sensitivity to change, as attention is focused on enjoyment of the landscape. Tourists engaged in activities whereby attention is focused on the surrounding landscape or townscape also have a high sensitivity to change;
 - 4. transport views - Travel through an area is often the means by which the greatest numbers of people view the landscape. Because of the glimpsed nature of the view from trains or vehicles, people travelling through an area on main roads have a low sensitivity to change, while those on scenic routes have a medium sensitivity. People travelling through urban areas (including pedestrians where the focus is not in recreation) generally have a low sensitivity to change although in residential areas this increases to medium;
 - 5. hotels and healthcare institutions - People staying in hotels and healthcare institutions have periods of time when their attention may be focused on the landscape, whilst at other times attention is more likely to be focused on other activities. Based on the level of interaction with the surrounding landscape, these receptors have a medium sensitivity to change;
 - 6. employment - People at work and within educational institutions are the least sensitive receptors, as their attention is likely to be focused on their work activity. These receptors have a low sensitivity to change; and
 - 7. active sports - None of these receptor types have been identified within the study area.

Viewpoint o83.4.001: View north-west from Mop End Lane across the A413 Amersham Road

This viewpoint is representative of views from Mop End Lane which travels through the grounds of Shardeloes and of the vehicles travelling along the A413 Amersham Road.

Figure 7: Viewpoint o83.4.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 8: Viewpoint o83.4.001 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Winter
The A413 Amersham Road forms the foreground with gently rising agricultural fields visible through a large gap in the roadside vegetation in the middle ground beyond. The background and skyline of the view is formed by Keepers Wood (illustrated in Figure 7).

Summer
During summer, vegetation along the roadside further filters and screen views of the middle ground to right and left of the gap (illustrated in Figure 8).

Viewpoint o83.2.002: View east from Parkview Cottages along the A413 Amersham Road

The viewpoint is representative of views from Parkview Cottages on the A413 Amersham Road.

Figure 9: Viewpoint o83.2.002 – winter view Date taken: 4 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 10: Viewpoint o83.2.002 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Winter

The A413 Amersham Road forms the foreground whilst views of the middle ground are filtered by a dense linear belt of semi-mature trees which runs along the edge of the road (illustrated in Figure 9). The silhouette of Keepers Wood is visible in the background of the view. Views from the upper stories of residential properties are more open.

Summer

The roadside vegetation forms a dense visual screen which obscures views through to agricultural fields (illustrated in Figure 10) during the summer months. Vegetation adjacent to the roadside forms the middle and background and skyline of the view.

Viewpoint o83.3.003: View north-east from PRow (Footpath LMI/22/1), South Bucks Way east of Little Missenden

This viewpoint is representative of views from the South Bucks Way PRow (Footpath LMI/22/1) and views from properties along Highmore Cottages Road.

Winter
Agricultural fields and field boundary vegetation form the foreground with mature field boundary vegetation and residential properties located along the A413 Amersham Road in the middle ground. Keepers Wood rises up the north side of the valley to the horizon, forming the backdrop to the view from this location (illustrated in Figure 11).

Summer
In the summer the foreground and middle ground of the view is not greatly changed. There are still distant views across the gently rising pasture landscape between the scattered field boundary vegetation. Within the background, field boundary vegetation and roadside vegetation form a dense screen (illustrated in Figure 12). Properties located along the A413 Amersham Road in the middle ground are still visible.

Figure 11: Viewpoint o83.3.003 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 12: Viewpoint o83.3.003 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Viewpoint o84.3.001: View south from PRoW (Footpath LMI/40/2) towards the A413 Amersham Road.

This viewpoint is representative of views from the PRoW (Footpath LMI/40/2) which passes through Keeper’s Wood towards the A413 Amersham Road.

Winter

The foreground of the view is characterised by a gently sloping agricultural field. There are elevated, open views from the PRoW across gently sloping agricultural field to the opposite valley side beyond. The A413 Amersham Road and sparse associated vegetation form the middle ground. The break in roadside vegetation allows clear views across the road and associated traffic (illustrated in Figure 13). The background consists of agricultural fields and woodland blocks, predominantly on hill tops forming the skyline. Woodland on the opposite valley slope is a notable feature, although there are filtered views to pastoral fields beyond.

Summer

The foreground view across the agricultural field does not differ greatly during the summer, due to the absence of intervening vegetation (illustrated in Figure 14). The large section of open view towards the road remains during the summer months. Where there is dense vegetation, however, adjacent to the A413 Amersham Road this further screens the lower section of the opposite rising valley slopes. The valley slopes woodland forms a more dense and prominent skyline.

Figure 13: Viewpoint o84.3.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 14: Viewpoint o84.3.001 – summer view Date taken: 21 August 2012. Nikon D3200 50mm lens (stitched panorama)



Viewpoint o86.2.001: View south from Bullbaiters Lane and PRow (Bridleway LMI/27/1) towards Mantle’s Wood.

This viewpoint is indicative of views south-west from residential properties on Bullbaiters Lane and users of PRow (Bridleway LMI/27/1).

Figure 15: Viewpoint o86.2.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 16: Viewpoint o86.2.001 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Winter
A hedgerow in the foreground filters views across adjacent agricultural fields in the middle ground. A dense block of woodland defines the background and skyline of the view (illustrated in Figure 15). From residential properties located along Bullbaiters Lane, ground floor views are filtered by boundary vegetation, fences and hedgerow in the foreground. Views from upper storey windows are more open.

Summer
During the summer months, mature trees and hedgerows further screen views across the adjacent agricultural fields and towards the woodland block in the distance (as illustrated in Figure 16). Views from residential properties upper storey windows are further filtered by intervening vegetation.

Viewpoint o87.2.001: View north-east from Hyde Lane and adjacent residential properties.

This viewpoint is indicative of the views from residential properties on Hyde Lane.

Figure 17 : Viewpoint o87.2.001 – winter view Date taken: 4 February 2013. Nikon D3200 35mm lens (stitched panorama)



Figure 18: Viewpoint o87.2.001 – summer view Date taken: 14 June 2013. Nikon D3200 35mm lens (stitched panorama)



Winter
Garden and roadside vegetation in the foreground filters views through to agricultural fields in the middle ground (illustrated in Figure 17). Views in the background are of Hedgemoor Wood on the skyline. Upper storey views from residential properties enable more distant views across the valley.

Summer
Mature hedgerows and intermittent trees further screen views through to the middle ground and background (illustrated in Figure 18). Hedgemoor Wood forms the background of the view.

Viewpoint o87.2.002: View north from Hyde Lane and adjacent residential properties.

This viewpoint is representative of views from residential and agricultural buildings on Hyde Lane.

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter or summer photograph

Winter

The foreground is characterised by views towards neighbouring agricultural fields and associated residential and farm buildings. In the background of the view, there are mature field hedgerows and intermittent trees, with areas of woodland block beyond.

Summer

Views do not differ greatly during the summer months as there is little intervening vegetation. Residential and field hedgerows partially filter views across adjacent pasture fields.

Viewpoint o87.3.003: View north from PRow (Footpath LMI/21/1).

This viewpoint is representative of views from PRow (Footpath LMI/21/1) passing across agricultural fields near to Mantle’s Wood.

Winter

In the foreground of the view is a gently sloping agricultural field. The view is characteristic of open views from the PRow across agricultural fields (illustrated in Figure 19), with views towards Mantle’s Wood in the middle ground. Mantle’s Wood is set within a depression and rises up the sides of the valley truncating the view and forming the skyline. During the winter the individual coniferous trees are more prominent within the deciduous woodland.

Summer

During summer the view from this location does not alter significantly as there is no intervening vegetation. Mantle’s Wood during the summer months forms a denser backdrop to the view (illustrated in Figure 20).

Figure 19: Viewpoint o87.3.003 – winter view Date taken: 5 March 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 20: Viewpoint o87.3.003 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Viewpoint o88.2.001: View south from Hyde Heath Road and residential properties on Chesham Road.

This viewpoint is on Hyde Heath Road and is representative of views from residential properties located along Chesham Road.

Winter

The foreground is formed by a roadside hedgerow with mature trees which filters views beyond. This leads to views of agricultural fields in the middle ground, with a mature woodland block in the background forming the skyline (illustrated in Figure 21). There are intermittent glimpsed views towards the agricultural fields in the absence of leaf cover.

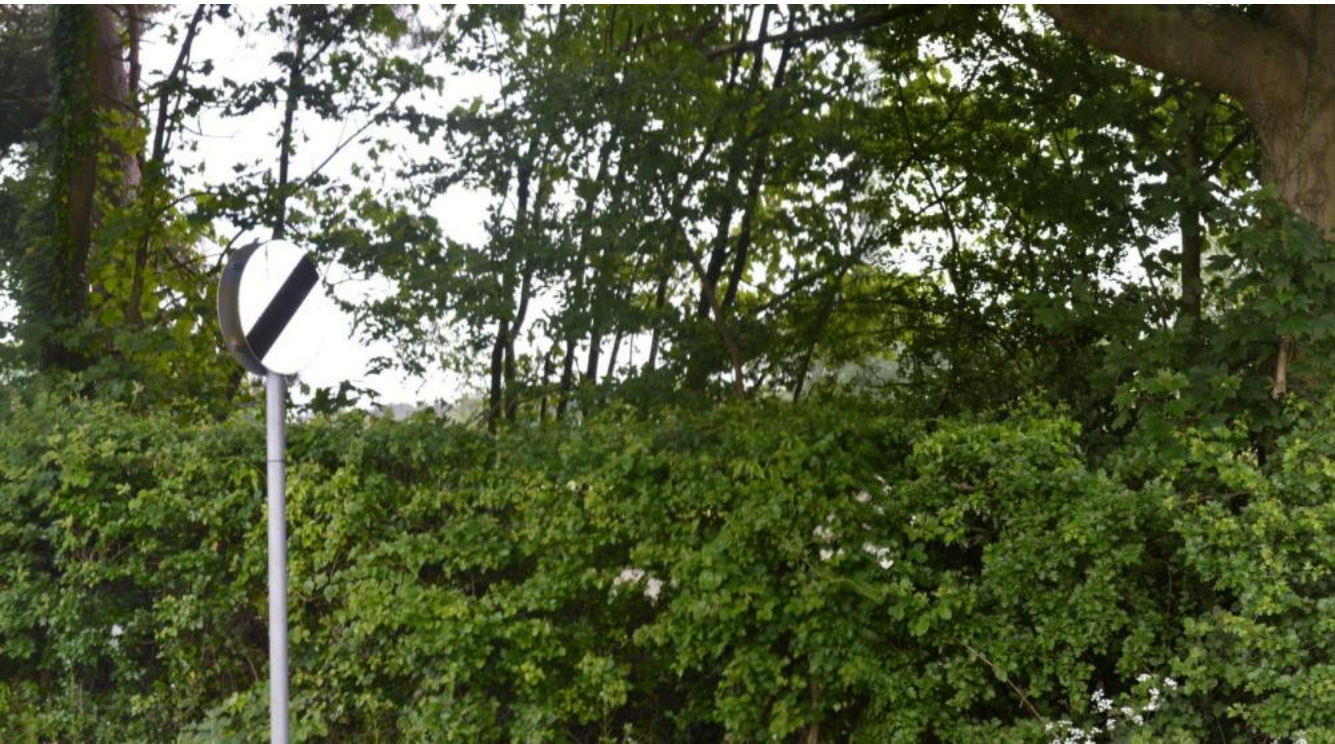
Summer

In the summer garden and roadside vegetation further filters views south across the agricultural fields in the middle ground (illustrated in Figure 22). Upper storey views are further filtered by the upper branches of mature trees adjacent to the roadside.

Figure 21: Viewpoint o88.2.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens



Figure 22: Viewpoint o88.2.001 – summer view Date taken: 14 June 2013. Nikon D3200 50mm lens



Viewpoint o88.4.002: View south-west from Hyde Heath Road.

This viewpoint is representative of views from Hyde Heath Road taken from a gap in the hedgerow.

Figure 23: Viewpoint o88.4.002 – winter view Date taken: 5 February 2013. Nikon D3200 35mm lens (stitched panorama)



Figure 24: Viewpoint o88.4.002 – summer view Date taken: 13 June 2013. Nikon D3200 35mm lens (stitched panorama)



Winter

The foreground is filtered by roadside vegetation, whilst the middle ground is formed by open agricultural fields across to woodland blocks in the distance, (illustrated in Figure 23). In the background, Hedgemoor and Mantle's Woods form the skyline.

Summer

Roadside vegetation further filters views to the field beyond. Crops further limit views across the landscape at lower levels during a short period of the summer months. Mantle's Wood forms a dense block in the background of the view and defines the skyline (illustrated in Figure 24). In the background of the view pylons are seen on the skyline.

Viewpoint o88.2.004: View south-east from PRow (Footpath GMI/23/6) and residential property The Hyde.

This viewpoint is indicative of views south-east from PRow (Footpath GMI/23/6) and the residential property 'The Hyde'.

Winter

Views towards the middle ground are open, consisting of pasture. Substantial hedgerows with mature trees filter views to pasture beyond. There are glimpsed views through gaps in field boundaries to less dense vegetation to the fields beyond. Telegraph poles which cross the landscape are prominent vertical elements in the view.

Summer

During the summer the dense field boundary hedgerows and mature trees further screen and filter views to the pasture fields beyond (illustrated in Figure 25).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter photograph

Figure 25: Viewpoint o88.2.004 – summer view Date taken: 21 August 2012. Nikon D3200 50mm lens



Viewpoint o88.4.003: View south-west from Hyde Heath Road.

This viewpoint is indicative of views south-west from Hyde Heath Road taken from a gap in the hedgerow.

Figure 26: Viewpoint o88.4.003 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 27: Viewpoint o88.4.003 – summer view Date taken: 21 August 2012. Nikon D3200 50mm lens (stitched panorama)



Winter
The foreground view is filtered by roadside vegetation, whilst the middle ground is formed by open agricultural fields with views across to the woodland blocks of Hedgemoor and Mantle’s Woods in the distance (illustrated in Figure 26). Telegraph poles form a vertical element where seen against the skyline and cross the agricultural field in the middle ground of the view.

Summer
During the summer roadside vegetation further filters views to the arable field beyond (illustrated in Figure 27). In the background of the view Mantle’s Wood forms the skyline. Telegraph poles cross the field in the middle ground of the view.

Viewpoint 089.3.003: View north from PRow (Footpath GMI/33/5).

This viewpoint is indicative of views north-east from PRow (Footpath GMI/33/5).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter or summer photograph

Winter

There are open views across agricultural fields in the foreground and middle ground.
The background comprises residential properties along Chesham Road and associated garden and roadside vegetation.

Summer

During the summer the view from this location is similar to that during the winter.
The foreground remains predominantly open. Boundary hedgerows and intermittent trees further filter views in the middle ground.

Viewpoint o89.2.004: View north-east from Cudsdens Court residential properties.

This viewpoint is representative of residential properties at Cudsdens Court and the B485 Chesham Road.

Winter
Annie Baileys public house is located in the middle ground, partially screened by roadside trees (illustrated in Figure 28). From Cudsdens Court properties there are filtered views through field boundary vegetation to properties along King’s Lane. In the background of the view, there are agricultural fields and field boundary trees and hedgerows.

Summer
The view along Chesham Road does not greatly differ although views of the public house are further screened by adjacent trees (illustrated in Figure 29). The dense foliage of intervening hedgerows further screens views across agricultural fields from the Cudsdens Court properties. Views to King’s Lane are further filtered, partially screening views from properties.

Figure 28: Viewpoint o89.2.004 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 29: Viewpoint o89.2.004 – summer view Date taken: 13 June 2012. Nikon D3200 50mm lens (stitched panorama)



Viewpoint 090.2.001: View south from the B485 Chesham Road and associated residential properties.

This viewpoint is indicative of views from properties located along Chesham Road and Chesham Road. The photograph is taken from over the roadside hedgerow

Winter
There are filtered views across agricultural fields towards field boundary vegetation in the background (illustrated in Figure 30). The middle ground view is of an open arable field. From upper storey windows there are more open views across agricultural fields.

Summer
During the summer roadside hedgerows further filters views across agricultural fields. From residential properties vegetation within back gardens partially screen views across the agricultural land to the west (illustrated in Figure 31). In the background of the view field boundary hedgerows and mature trees form a more dense skyline during the summer months.

Figure 30: Viewpoint 090.2.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens



Figure 31: Viewpoint 090.2.001 – summer view Date taken: 13 June 2012. Nikon D3200 50mm lens (stitched panorama)



Viewpoint 090.3.002: View south-west from PRow (Footpath GMI/23/5).

This viewpoint is indicative of views looking south-west from PRow (Footpath GMI/23/5)

Winter

There are open views across pasture fields in the foreground towards roadside vegetation along Chesham Road and King's Lane. In the background there are filtered glimpsed views of the adjacent roadside properties. Telegraph poles cross the landscape. In the middle ground.

Summer

During the summer, views from this location do not alter greatly due to the open nature of the foreground. Roadside vegetation along Chesham Road and King's Lane further filters views to the background of the scene (illustrated in Figure 32).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter photograph

Figure 32: Viewpoint 090.3.002 – summer view Date taken: 13 June 2013. Nikon D3200 35mm lens (stitched panorama)



Viewpoint 091.3.001: View north-east from PRow (Footpath GMI/13/3).

This viewpoint is indicative of views from PRow (Footpath GMI/13/3).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter or summer photograph

Winter

Views of the foreground are filtered views through field hedgerows from the PRow, stretching across gently rising agricultural fields to woodland block on the top of the hill. The view is narrowed to the north by dense hedgerows with intermittent mature trees.

Summer

Intervening field boundary hedgerows further filters views across the landscape at a low level. Mature boundary trees partially screen views across agricultural fields in the background of the view.

Viewpoint 091.3.002: View north-east from PRow (Footpath GMI/12/1)

This viewpoint is indicative of views from PRow (Footpath GMI/12/1).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter or summer photograph

Winter

In the foreground there are open views from the PRow stretching across agricultural fields towards woodland and the surrounding field boundary vegetation. The view to the north-west is filtered by the adjacent dense field boundary vegetation.

Summer

During summer intervening field boundary hedgerows further filter views across the landscape. The mature boundary trees partially screen views across agricultural fields especially to the north-west of the view.

Viewpoint 092.2.001: View south-west from Frith Hill including associated residential properties.

This viewpoint is representative of views from residential properties along Frith Hill.

Winter

The foreground and middle ground of the view is open along Frith Hill (illustrated in Figure 33). Views are filtered through gardens, with agricultural fields and associated field boundary vegetation dominating the background. Views from upper storey windows of the perimeter residential properties are more open. The view along Frith Lane widens where hedgerows are cut back away from the carriageway.

Summer

The openness of the view along Frith Hill is largely unchanged during summer months (illustrated in Figure 34). Views from residential properties are partially filtered by garden vegetation to agricultural fields beyond.

Figure 33: Viewpoint 092.2.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 34: Viewpoint 092.2.001 – summer view Date taken: 14 June 2013. Nikon D3200 50mm lens (stitched panorama)



Viewpoint 092.3.003: View south-west from P_{RoW} (Footpath GMI/13/3).

This viewpoint is representative of views from P_{RoW} (Footpath GMI/13/3).

Winter

There are open views across the foreground and middle ground stretching across gently undulating agricultural fields towards woodland block in the background.

Summer

During the summer the view is not greatly different as there is little intervening vegetation in the foreground or middle ground of the view. During the summer the woodland block in the background of the view creates a more solid screen (illustrated in Figure 35).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter photograph

Figure 35: Viewpoint 092.3.003 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Viewpoint 093.3.001: View north-east from PRow (Footpath GMI/2/1).

This viewpoint is representative of views north-east from PRow (Footpath GMI/2/1).

Winter

There are open views across the foreground and middle ground from the PRow across the rising agricultural fields. There are also filtered views to the north through intervening field boundary vegetation. Gaps in the field boundary vegetation afford distant views to fields beyond in the background. Pylons are prominent vertical elements crossing the landscape within the middle ground of the view.

Summer

During the summer field boundary vegetation further screens views of the landscape beyond. Views to the north-west are screened by dense field boundary vegetation. The open views across the agricultural land remain largely unchanged. The trees form a more defined skyline in the background (Illustrated in Figure 36).

Due to lack of site access/changes to the Proposed Scheme/the project programme, it has not been possible to capture a winter photograph

Figure 36: Viewpoint 093.3.001 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Viewpoint 094.2.001: View south-west from PRow (Footpath GMI/2/1) and residential properties on Potter Row.

This viewpoint is representative of views looking south-west from residential properties adjacent to Potter Row Road, taken from PRow (Footpath GMI/2/1).

Figure 37: Viewpoint 094.2.001 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 38: Viewpoint 094.2.001 – summer view Date taken: 13 June 2013. Nikon D3200 50mm lens (stitched panorama)



Winter

Views from residential properties are dominated by grassland in the foreground of the view, with deciduous mature trees and hedgerow in the middle distance and background. Prominent features within the view are the strong vertical presence of the pylons and telegraph poles and lines (illustrated in Figure 37). Field boundary trees and woodland define the skyline in the background. The view is through garden vegetation associated with the properties, over clipped hedgerows and across agricultural fields. The slightly rising ground shortens the view across the landscape. In a few locations along Potter Row Road, views from upper stories are further screened by adjacent roadside tree canopies.

Summer

The view from the PRow is largely unchanged other than the tree skyline is further defined by the trees being in leaf (illustrated in Figure 38). The views from residential properties on Potter Row are further filtered by intervening garden and field boundary vegetation.

Viewpoint 094.2.002: View south-west from residential properties on Potter Row.

This viewpoint is indicative of views looking south-west from residential properties located along Potter Row Road, taken from Potter Row.

Winter

This view is characterised by roadside hedgerows with intermittent mature trees and occasional views over the hedgerow. Views across the middle ground are open agricultural land with the backdrop of woodland on the tops of hills. In the middle ground pylons are distinctive vertical elements (illustrated in Figure 39). Views are filtered by garden vegetation in the foreground, with upper storey windows providing views through and over garden vegetation.

Summer

During the summer the roadside hedgerows grow taller and screen the field in the foreground (illustrated in Figure 40). The middle and background of the view remain largely unchanged. Views from residential properties are further screened by garden and field boundary vegetation.

Figure 39: Viewpoint 094.2.002 – winter view Date taken: 5 February 2013. Nikon D3200 50mm lens (stitched panorama)



Figure 40: Viewpoint 094.2.002 – summer view Date taken: 14 June 2013. Nikon D3200 50mm lens (stitched panorama)



Viewpoint 094.4.003: View west along Leather Lane.

This viewpoint is representative of views looking west along Leather Lane.

Figure 41: Viewpoint 094.4.003 – winter view Date taken: 5 February 2013. Nikon D3200 35mm lens (stitched panorama)



Figure 42: Viewpoint 094.4.003 – summer view Date taken: 14 June 2013. Nikon D3200 35mm lens (stitched panorama)



Winter

The ground rises up from the sunken road in the foreground of the view. To the north of the road the view is predominantly open and the land slopes away within the valley in the middle ground. Within the middle ground of the view pylons are prominent vertical features crossing the open fields. The opposite valley slope consists of agricultural fields defined by dense hedgerows and woodland which forms the skyline in the background (illustrated in Figure 41).

Summer

The openness of the view does not change greatly during the summer months except for views south which become further filtered in locations and predominantly screened (illustrated in Figure 42). Where present, the roadside verge vegetation further filters and partially screens views through to the middle ground looking northwards. Within the middle ground the field boundary hedgerows and trees form a more defined visual screen through to the background.

Part 3 Assessment matrices

1 Landscape assessment matrix

1.1.1 Table 2 summarises the assessment of significance for all the LCA identified within the study area. These are ordered from south to north along the route of the Proposed Scheme. The assessment of significant effects is presented in Volume 2 CFA Report 9, Section 9. Not significant effects (minor or negligible) are summarised in Part 4 of this volume. For some LCA it has been identified that no further assessment is required in one of the assessment years. This is on the basis that, through application of professional judgement, it has been determined that no significant effects will occur and therefore no further assessment has been undertaken.

Table 2: Landscape assessment matrix

Landscape character area	Construction	Operation year 1 (2026)	Operation year 15 (2041)	Operation year 60 (2086)
Misbourne Upper North LCA	Major adverse	Moderate adverse	Minor adverse	Negligible
Penn North LCA	Negligible	Negligible	Negligible	Negligible
Hyde Heath North LCA	Major adverse	Moderate adverse	Minor adverse	Negligible
Bellingdon LCA	Negligible	Negligible	Negligible	Negligible
Great Kingshill LCA	Negligible	Negligible	Negligible	Negligible
Lee and Buckland Common Farmland LCA	Major adverse	Moderate adverse	Minor adverse	Negligible

2 Visual assessment matrix

2.1.1 Table 3 summarises the assessment of significance for all the representative viewpoints identified within the study area. These are ordered from south to north along the route of the Proposed Scheme. The assessment of significant effects is presented in Volume 2 CFA Report 9, Section 9. Not significant effects (minor or negligible) are summarised in Part 4 of this Volume. For some viewpoints it has been identified that no further assessment is required in one of the assessment years/seasons. This is on the basis that, through application of professional judgement, it has been determined that no significant effects will occur and therefore no further assessment has been undertaken. The night-time assessment has only been undertaken for residential, hotel and healthcare receptors with a view of proposed continuous lighting during either construction or operation. The summer view of the route from this location during year 1 of operation is illustrated in the photomontage in Figure LV-01-036 (Volume 2 CFA9 Map Book). The summer view of the route from this location during year 1 of operation is illustrated in the photomontage in Figure LV-01-037. The summer view of the route from this location during year 1 of operation is illustrated in the photomontage in Figure LV-01-040 (Volume 2 CFA9 Map Book).

Table 3: Visual assessment matrix

Viewpoints		Construction		Operation year 1 (2026)			Operation year 15 (2041)	Operation year 60 (2086)
		Winter	Night-time	Winter	Summer	Night-time	summer	summer
o83.4.001	View north-west from Mop End Lane across the A413 Amersham Road.	Moderate adverse	No further assessment required	Minor adverse	Minor adverse	No further assessment required	Negligible	Negligible
o83.2.002	View east from Parkview Cottages along the A413 Amersham Road.	Moderate adverse	No further assessment required	Minor adverse	Negligible	No further assessment required	Negligible	Negligible
o83.3.003	View north-east from PRoW (Footpath LMI/22/1), South Bucks Way east of Little Missenden.	Moderate adverse	No further assessment required	Minor adverse	Negligible	No further assessment required	Negligible	Negligible
o84.3.001	View south from PRoW (Footpath LMI/40/2) towards the A413 Amersham Road.	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
o86.2.001	View south from Bullbaiters Lane and PRoW (Bridleway LMI/27/1) towards Mantle's Wood.	Major adverse	No further assessment required	Moderate adverse	Minor adverse	No further assessment required	Minor adverse	Negligible
o87.2.001	View north-east from Hyde Lane and adjacent residential properties.	Moderate adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
o87.2.002	View north from Hyde Lane and adjacent residential properties.	Major adverse	No further assessment required	Major adverse	Major adverse	No further assessment required	Minor adverse	Negligible
o87.3.003	View north from PRoW (Footpath LMI/21/1).	Major adverse	No further assessment required	Major adverse	Major adverse	No further assessment required	Negligible	Negligible
o88.2.001	View south from Hyde Heath Road and residential properties on Chesham Road.	Moderate adverse	No further assessment required	Moderate adverse	Minor adverse	No further assessment required	Minor adverse	Negligible
o88.4.002	View south-west from Hyde Heath Road.	Moderate adverse	No further assessment required	Minor adverse	Minor adverse	No further assessment required	Negligible	Negligible
o88.2.004	View south-east from PRoW (Footpath GMI/23/6) and residential property The Hyde.	Major adverse	No further assessment required	Minor adverse	Negligible	No further assessment required	Negligible	Negligible
o88.4.003	View south-west from Hyde Heath Road.	Moderate adverse	No further assessment required	Minor adverse	Minor adverse	No further assessment required	Negligible	Negligible
o89.3.003	View north from PRoW (Footpath GMI/33/5).	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible

Viewpoints		Construction		Operation year 1 (2026)			Operation year 15 (2041)	Operation year 60 (2086)
		Winter	Night-time	Winter	Summer	Night-time	summer	summer
089.2.004	View north-east from Cudsdens Court residential properties.	Major adverse	No further assessment required	Moderate adverse	Minor adverse	No further assessment required	Negligible	Negligible
090.2.001	View south from the B485 Chesham Road and associated residential properties.	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
090.3.002	View south-west from PRoW (Footpath GMI/23/5).	Major adverse	No further assessment required	Minor adverse	Minor adverse	No further assessment required	Negligible	Negligible
091.3.001	View north-east from PRoW (Footpath GMI/13/3).	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
091.3.002	View north-east from PRoW (Footpath GMI/12/1).	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
092.2.001	View south-west from Frith Hill including associated residential properties.	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
092.3.003	View south-west from PRoW (Footpath GMI/13/3).	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
093.3.001	View north-east from PRoW (Footpath GMI/2/1).	Major adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible
094.2.001	View south-west from PRoW (Footpath GMI/2/1) and residential properties on Potter Row.	Major adverse	No further assessment required	Moderate adverse	Minor adverse	No further assessment required	Minor adverse	Negligible
094.2.002	View south-west from residential properties on Potter Row.	Major adverse	No further assessment required	Moderate adverse	Minor adverse	No further assessment required	Negligible	Negligible
094.4.003	View west along Leather Lane.	Minor adverse	No further assessment required	Moderate adverse	Moderate adverse	No further assessment required	Minor adverse	Negligible

Part 4 Schedule of not significant effects

1 Temporary effects arising during construction

1.1.1 Due to the scale of the construction activities, works will be highly visible in many locations and will have the potential to give rise to significant effects which cannot be mitigated. This is commonplace with construction of major infrastructure projects, but it should be noted that these effects are temporary in nature and relate to the peak construction phase. Effects during other phases of works are likely to be less due to less construction equipment being required at the time and a reduced intensity of construction activity.

1.2 Landscape assessment

1.2.1 Table 4 summarises the assessment for all the LCA identified within the study area, which are considered to experience not significant effects (minor or negligible) during construction of the Proposed Scheme. These are ordered from south to north along the route of the Proposed Scheme. The assessment of significant effects is presented in Volume 2 CFA Report 9, Section 9.

Table 4: Schedule of not significant landscape effects during construction

Landscape character area	Description of effect
Penn North LCA	Construction works related to the Proposed Scheme, in particular the Little Missenden vent shaft, is outside of the LCA and will involve no loss of characteristic landscape elements within the LCA. Therefore the magnitude of change to landscape character is considered to be negligible. Assessed alongside the high sensitivity of the character area, this will result in negligible effects.
Bellingdon LCA	The Proposed Scheme and associated construction activity are located outside of the Bellingdon LCA and there will be no direct impacts on the LCA. Construction will involve no loss of characteristic landscape elements within the LCA. Therefore the magnitude of change to landscape character is considered to be negligible. Assessed alongside the high sensitivity of the character area, this will result in negligible effects.
Great Kingshill LCA	The Proposed Scheme and associated construction will involve no loss of characteristic landscape elements within the LCA. As the Proposed Scheme is present within the adjacent LCA and will not directly impact on the landscape. Therefore the magnitude of change to Great Kingshill LCA is considered to be negligible. This assessed alongside the high sensitivity of the character area will result in negligible effects.

1.3 Visual assessment

1.3.1 Table 5 below summarises the assessment for all the representative viewpoints identified within the study area, which are considered to experience not significant effects (minor or negligible) during construction of the Proposed Scheme. These are ordered from south to north along the route of the Proposed Scheme. The assessment of significant effects is presented in Volume 2 CFA Report 9, Section 9. The construction assessment has been undertaken during winter, in line with best practice guidance, to ensure a robust assessment. However, in some cases, visibility of construction activities may be reduced during summer when vegetation, if present in a view, would be in leaf.

Table 5: Schedule of not significant visual effects during construction

Viewpoint	Description of effect
094.4.003: View west along Leather Lane.	During construction access along Leather Lane will be restricted creating distant views from nearer Potter Row (approximately 200m) of construction activities associated with the realignment of Leather Lane. There will also be views of the plant and equipment creating the mitigation earthworks along the route of the Proposed Scheme in the middle ground. The removal of field boundary vegetation to enable the construction will also be visible. The Leather Lane satellite compound will be visible in close proximity to this receptor in the foreground of the view. The formation of newly re-profiled landform covering several large fields, approximately 4m higher than the existing ground level will also be visible. Therefore, the magnitude of change is considered to be medium. The medium magnitude of change assessed alongside the low sensitivity of the receptor will result in a minor adverse effect.

2 Permanent effects arising during operation

2.1 Landscape assessment

2.1.1 Table 6 summarises the assessment for all the LCA identified within the study area, which are considered to experience not significant effects (minor or negligible) during the operation of the Proposed Scheme. These are ordered from south to north along the route of the Proposed Scheme. The year 15 and year 60 assessments take into account the further integration of the Proposed Scheme into the landscape following greater maturity of the proposed planting. The assessment of significant effects is presented in Volume 2 CFA Report 9, Section 9.

Table 6: Schedule of not significant landscape effects during operation

Landscape character area	Description of effect - operation year 1 (2026)	Description of effect - operation year 15 (2041)	Description of effect - operation year 60 (2086)
Misbourne Upper North LCA	Significantly affected: refer to Volume 2.	Where the Proposed Scheme remains in tunnel through this character area, there will be no significant impact upon landscape character during the operational phase. The introduction of the Little Missenden vent shaft headhouse integrated into the existing landscape will not have a significant impact upon the landscape character within the Misbourne Upper North LCA. The north portal will be located close to Mantle’s Wood within a depression in the landscape and there will also be a section of the Proposed Scheme in cutting. The proposed woodland planting will still be distinguishable from the areas of ancient woodland. Given the low magnitude of change within the high sensitivity landscape, the scale of the impact will result in a minor adverse significance of effects.	The growth of the proposed planting will further integrate the Proposed Scheme into the existing setting of Misbourne Upper North LCA. The negligible magnitude of change, assessed alongside the high sensitivity of the LCA, will result in negligible effects.
Penn North LCA	The Proposed Scheme is outside of the Penn North LCA the closest element is the Little Missenden vent shaft set within the valley of the Misbourne Upper North LCA. The addition of elements within the adjacent LCA will not influence the overall character and will therefore experience a negligible magnitude of change. The negligible magnitude of change assessed alongside the high sensitivity of the LCA, results in a negligible significance of effects.	The Proposed Scheme is outside of the Penn North LCA and the nearest element is the Little Missenden vent shaft headhouse which will be screened by year 15 operation. Penn North LCA will experience a negligible magnitude of change. The negligible magnitude of change assessed alongside the high sensitivity of the LCA, results in a negligible significance of effects.	The negligible magnitude of change assessed alongside the high sensitivity of the LCA, and the Proposed Scheme being outside of the LCA results in a negligible significance of effects.
Hyde Heath North LCA	Significantly affected: refer to Volume 2.	The Proposed Scheme will be within a section of tunnel. The tunnel portal will be concealed within the existing and proposed wood which will lead into deep cutting which will physically sever a small hamlet. Whilst the portal and cutting will be sizeable, the length of green tunnel will enable the scheme to be integrated into the existing landscape at this point. The areas of removed woodland will still be noticeable by year 15. Given the low magnitude of change within the high sensitivity landscape, the scale of the impact will result in a minor adverse significance of effects.	The further growth of the proposed mitigation planting will integrate the Proposed Scheme into the existing setting of the Hyde Heath North LCA. The negligible magnitude of change, assessed alongside the high sensitivity of the LCA, will result in negligible effects.
Bellingdon LCA	The Proposed Scheme is outside of the character area within the adjacent Hyde Heath North LCA, as such will experience a negligible magnitude of impact with a negligible significance of effects.	The proposed planting within the adjacent LCA will further integrate the Proposed Scheme. The significance of effects will be negligible	The growth of the proposed planting will further integrate into the existing setting of Bellingdon LCA. The negligible magnitude of change, assessed alongside the high sensitivity of the LCA, will result in negligible effects.
Great Kingshill LCA	The Proposed Scheme is outside of the character area within the adjacent Misbourne Upper North LCA and as such will experience a negligible magnitude of impact with a negligible significance of effects.	The Proposed Scheme in cutting, tunnel portal and section of green tunnel will be further integrated into the Misbourne Upper North LCA by the proposed mitigation planting. Given the negligible magnitude of change within the high sensitivity landscape, the scale of the impact will result in a negligible adverse significance of effects.	The further growth of the proposed mitigation planting will enable the Proposed Scheme to integrate into the existing setting of the adjacent LCA. Hyde Heath North LCA. The negligible magnitude of change, assessed alongside the high sensitivity of the LCA, will result in negligible effects.
Lee Buckland Common Farmland LCA	Significantly affected: refer to Volume 2.	The Proposed Scheme will run through this LCA in green tunnel and a small section of cutting. The proposed mitigation planting will integrate the green tunnel to into the existing landscape. The absence of vegetation along the small section of cutting will be perceptible and out of character within the surrounding character although in a very localised area of the LCA. A low magnitude of impact is assessed leading to minor adverse significance of effects.	The maturing proposed planting will further enable the Proposed Scheme to integrate into Lee Buckland Common LCA. This will result negligible effects.

2.2 Visual assessment

2.2.1 Table 7 summarises the assessment for all the representative viewpoints identified within the study area which are considered to experience not significant effects (minor or negligible) during operation of the Proposed Scheme. These are ordered from south to north along the route of the Proposed Scheme. The year 15 and year 60 assessments take into account how greater maturity of proposed planting may further screen views of the Proposed Scheme. The assessment of significant effects is presented in Volume 2 CFA Report 9, Section 9.

Table 7: Schedule of not significant visual effects during operation

Viewpoint	Description of effect – operation year 1 (2026)		Description of effect – operation year 15 (2041)	Description of effect – operation year 60 (2086)
	Winter	Summer	summer	summer
o83.4.001 View north-west from Mop End Lane across the A413 Amersham Road.	There will be filtered views through roadside vegetation of the proposed Little Missenden vent shaft headhouse. The embankment surrounding the vent shaft headhouse will screen the lower parts of the Proposed Scheme from this location. The low magnitude of change assessed alongside the medium sensitivity of the receptor will result in minor adverse effects.	During the summer existing roadside vegetation will screen sections of the proposed Little Missenden vent shaft headhouse. The embankment surrounding the vent shaft headhouse will screen the lower parts of the Proposed Scheme from this location. The low magnitude of change assessed alongside the medium sensitivity of the receptor will result in minor adverse effects.	The increased growth of proposed planting and existing roadside vegetation along the A413 Amersham Road will further obscure views towards the proposed Little Missenden vent shaft headhouse. The magnitude of change will be negligible and will result in negligible adverse effects.	By year 60 there will be no noticeable disparity between the maturity of existing vegetation and that of proposed mitigation planting. The Little Missenden vent shaft headhouse will be completely screened from this location. The negligible magnitude of change, assessed alongside the high sensitivity of the receptor, will result in negligible effects.
o83.2.002 View east from Parkview Cottages along the A413 Amersham Road. The summer view of the Proposed Scheme from this location during year 1 of operation is illustrated in the photomontage in LV-01-037 (Volume 2, CFA9 Map Book). The summer view of the Proposed Scheme from this location during year 15 of operation is illustrated in the photomontage in LV-01-230 (Volume 2, CFA9 Map Book).	There will be middle ground filtered views from Parkview Cottages across the A413 Amersham Road, to the Little Missenden vent shaft headhouse in the middle ground through existing and immature mitigation planting. The existing roadside vegetation will filter views of the vent shaft headhouse. The access road into the site will open up views through to the vent shaft headhouse beyond. The low magnitude of change, combined with the high sensitivity of the receptor, will result in a discernible deterioration in the existing view and minor adverse effects.	During the summer vegetation located in the garden of the property in the foreground and intervening vegetation adjacent to the A413 Amersham Road will further screen views of the little Missenden vent shaft headhouse. The intervening vegetation will reduce the magnitude of change to negligible.	The growth of proposed mitigation planting in addition to existing A413 roadside vegetation will obscure views towards the proposed Little Missenden vent shaft headhouse by year 15 operation. The magnitude of change will remain negligible and will result in negligible adverse effects.	The continued growth of vegetation in the middle ground of the view will screen views of the Proposed Scheme. The negligible magnitude of change, assessed alongside the high sensitivity of the receptor, will result in negligible effects.
o83.3.003 View north-east from PRoW (Footpath LMI/40/2), South Bucks Way east of Little Missenden.	There will be views across gently rising agricultural land in the middle ground towards the Little Missenden vent shaft headhouse. There will be noticeable gap in the road side vegetation along the A413 Amersham Road from this location. The magnitude of change will be low and will result in minor adverse effects.	During the summer, intervening field hedgerows and road side vegetation will further screen views to the Little Missenden vent shaft and associated removed vegetation. The negligible magnitude of change, results in negligible effects.	By year 15, the growth of proposed mitigation planting, particularly along the A413 Amersham Road, will further integrate the scheme into the surrounding landscape. The magnitude of change will remain negligible and will result in negligible adverse effects.	By year 60 there will be no noticeable disparity between the maturity of existing vegetation and that of proposed mitigation planting. This will result in negligible effects.
o84.3.001 View south from PRoW (Footpath LMI/40/2) towards the A413 Amersham Road.	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	By year 15 of operation, planting proposed around the Little Missenden vent shaft headhouse will have matured, improving landscape integration and screening. The magnitude of change will be low and will result in minor adverse effects.	The continued growth and integration will screen views of the Little Missenden vent shaft headhouse from this location. The negligible magnitude of change, results in negligible effects.
o86.2.001 View south from Bullbaiters Lane and PRoW (Bridleway LM/27/1) towards Mantle's Wood.	Significantly affected: refer to Volume 2.	In the summer, intervening vegetation within the gardens of properties and along Bullbaiters Lane will further screen views of the Proposed Scheme. Therefore the magnitude of change will reduce to minor adverse.	The growth of a linear belt of vegetation planted parallel to Bullbaiters lane and the proposed bund, adjacent to the north portal access track, will have matured providing additional screening. The magnitude of change will be low and will result in minor adverse effects.	The continued growth of the proposed planting in the middle ground will screen views of the Proposed Scheme from this location. Therefore, the magnitude of change is considered to be negligible and will result in negligible effects.
o87.2.001 View north-east from Hyde Lane and adjacent residential properties.	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	In year 15 of operation, the planting on the Hyde Farm overbridge and along the cutting will have further established screening views of these elements. The proposed planting will integrate with the existing areas of woodland. The low magnitude of change, assessed alongside the high sensitivity of the receptor, will result in minor adverse effects.	By year 60 there will be no noticeable disparity between the maturity of existing vegetation and that of proposed mitigation planting. The Proposed Scheme will be screened from this location. The negligible magnitude of change, assessed alongside the high sensitivity of the receptor, will result in negligible effects.

Viewpoint	Description of effect – operation year 1 (2026)		Description of effect – operation year 15 (2041)	Description of effect – operation year 60 (2086)
	Winter	Summer	summer	summer
o87.2.002 View north from Hyde Lane and adjacent residential properties.	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	By year 15 of operation proposed planting within the garden and on Hyde farm overbridge approach embankments will have further established screening views of the overbridge and the Proposed Scheme in cutting. There will be filtered views along Hyde Lane overbridge. The low magnitude of change, assessed alongside the high sensitivity of the receptor, will result in minor adverse effects.	The Proposed Scheme will be predominantly screened from this location. The negligible magnitude of change, assessed alongside the high sensitivity of the receptor, will result in negligible effects.
o87.3.003 View north from PRoW (Footpath LMI/21/1).	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	In year 15 of operation, the extensive woodland plot to the south of the portal will have established to form an effective screen, enclosing and concealing the Proposed Scheme from this location. This will result in negligible effects.	The continued growth of the proposed planting will further integrate the north portal into the surrounding Mantle's Wood. This will result in negligible effects.
o88.2.001 View south from Hyde Heath Road and residential properties on Chesham Road.	Significantly affected: refer to Volume 2.	During the summer, intervening vegetation within the gardens of properties and along Hyde Heath Road will further screen views of the Proposed Scheme. The magnitude of change will reduce to low and will result in minor adverse effects.	By year 15 of operation, large plots of woodland planting will have established between the receptor and Proposed Scheme, thereby screening any views of the Proposed Scheme in cutting from this location. The magnitude of change will be low and will result in minor adverse effects.	The growth of proposed planting and existing roadside vegetation will obscure views towards the proposed vent shaft headhouse. The magnitude of change will be negligible and will result in negligible effects.
o88.4.002 View south-west from Hyde Heath Road.	During year 1 winter, long distance views towards the Proposed Scheme in cutting and gently rising earthworks, will result in a low magnitude of change. The low magnitude of change combined with the low sensitivity will result in minor adverse effects.	During the summer of year 1 operation, the lack of intervening vegetation will not result in a distinctive change to the assessment. The low magnitude of change combined with the low sensitivity will result in minor adverse effects.	By year 15 of operation large swathes of woodland reinstatement planting will have established concealing the Proposed Scheme in cutting. The magnitude of change will be negligible, resulting in negligible effects.	The proposed planting will have further established and the significance of effects will remain as negligible.
o88.4.003 View south-west from Hyde Heath Road.	There will be filtered views towards the Proposed Scheme in cutting, the permanent access track to balancing pond, earthworks will screen views to the background. The magnitude of change is considered to be low. The magnitude of change will be low, resulting in minor adverse effects.	During the summer of year 1 operation, the background view will not change greatly. Therefore the magnitude of change will remain low and result in minor adverse effects.	Large swathes of woodland reinstatement planting will have established concealing the Proposed Scheme from view in this location. The magnitude of change will be low, resulting in negligible effects.	By year 60, proposed woodland planting will integrate with the existing trees of Mantle's Wood resulting in negligible effects.
o88.2.004 View south-east from PRoW (Footpath GMI/23/6) and residential property The Hyde.	The intervening hedgerows and intermittent trees will filter views towards the Proposed Scheme in cutting. The area of re-profiled land and associated re-establishment of field boundaries will be evident. The low magnitude of change assessed alongside the high sensitivity of the receptor will result in minor adverse effects in the winter of year 1 of operation.	During the summer intervening mature hedgerows and trees will further filter and screen views of the Proposed Scheme. The magnitude of change will be negligible, resulting in negligible effects.	By year 15 of operation, large plots of woodland planting will have established between the receptor and Proposed Scheme, thereby screening any views of the Proposed Scheme in cutting from this location. The magnitude of change will be negligible and will result in negligible effects.	The proposed planting will have further established and the significance of effects will remain as negligible.
o89.3.003 View north from PRoW (Footpath GMI/33/5).	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	By year 15 of operation, a large area of proposed woodland planting will have established to form an effective screen of the Proposed Scheme in cutting. Consequently the effects on this receptor will be minor adverse.	The proposed planting will have further established and will screen views of the Proposed Scheme in cutting. This will result in negligible effects.

Viewpoint	Description of effect – operation year 1 (2026)		Description of effect – operation year 15 (2041)	Description of effect – operation year 60 (2086)
	Winter	Summer	summer	summer
<p>o89.2.004 View north from Cudsdens Court residential properties.</p> <p>The summer view of the Proposed Scheme from this location during year 1 of operation is illustrated in the photomontage in LV-01-037 (Volume 2, CFA9 Map Book).</p> <p>The summer view of the Proposed Scheme from this location during year 15 of operation is illustrated in the photomontage in LV-01-230 (Volume 2, CFA9 Map Book).</p>	Significantly affected: refer to Volume 2.	During the summer, intervening mature hedgerows and mature trees will further filter and screen views of the Proposed Scheme. Although there will be filtered views to the Proposed Scheme in the background. The low magnitude of change assessed alongside the high sensitivity of the receptor will result in minor adverse effects in the winter of year 1 operation.	By year 15 of operation, the proposed planting will have further established, integrating the green tunnel into the surrounding landscape. The view of the green tunnel will now be screened by the areas of woodland. The magnitude of change will be negligible and will result in negligible effects.	The growth of proposed planting will further integrate the Proposed Scheme into the surrounding landscape by Year 60 operation. The magnitude of change will be negligible and will result in negligible effects.
<p>o90.2.001 View south from B485 Chesham Road and associated residential properties.</p>	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	During year 15 operation, mitigation planting will have matured and offer screening in the immediate foreground of the view. Planting will also conceal Hyde Lane overbridge. The low magnitude change will result in minor adverse effects.	The proposed planting will have further established and screen views of the Proposed Scheme in cutting and Hyde Lane overbridge. There will be negligible effects.
<p>o90.3.002 View south-west from PRoW (Footpath GMI/23/5).</p>	There will be views of the proposed green tunnel in the middle ground and views of the realigned Chesham Road in the foreground. The most apparent changes in the view will be the removal of vegetation and immature proposed mitigation planting. The low magnitude of change assessed alongside the high sensitivity of the receptor will result in minor adverse effects in the winter of year 1 of operation.	During the summer months there will be no substantial intervening vegetation between the receptor and the realigned Chesham Road, King’s Lane and section of green tunnel. The significance of effects will be remain as minor adverse.	By year 15 of operation, the proposed planting will have further established, integrating the green tunnel into the surrounding landscape. The Chesham Road and King’s Lane proposed planting will have established and screen views of these elements. The magnitude of change will be negligible and will result in negligible effects.	The incremental growth of proposed planting will further integrate the Proposed Scheme into the existing vegetation. The magnitude of change will be remain as negligible and will result in negligible effects at year 60.
<p>o91.3.001 View north-east from PRoW (Footpath GMI/13/3).</p>	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	By year 15 of operation, planting associated with the green tunnel and portal will have established to integrate the structure with the surrounding landscape and further screening the Proposed Scheme in cutting. The low magnitude change will result in minor adverse effects.	The incremental growth of proposed planting will further obscure views towards the Proposed Scheme in cutting and green tunnel. The magnitude of change will be negligible and will result in negligible adverse effects.
<p>o91.3.002 View north-east from PRoW (Footpath GMI/12/1).</p>	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	Mitigation planting will have matured, screening the Proposed Scheme in cutting and partially screening the accommodation overbridge. The low magnitude of change assessed alongside the medium sensitivity of the receptor will result in a minor adverse effect in year 15 of operation.	The proposed planting will have further established and screen views of the Proposed Scheme in cutting and green tunnel. This will result in negligible effects.
<p>o92.2.001 View south-west from Frith Hill including associated residential properties</p>	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	Proposed hedgerow and woodland reinstatement planting will have further established, screening views to the green tunnel in the south-west and portal to the north-west. By year 15 the low magnitude change will result in minor adverse effects.	By year 60, the continued growth of the proposed planting will further integrate the scheme within the surrounding landscape. Therefore, the magnitude of change is considered to be negligible and will conclude in negligible effects.
<p>o92.3.003 View south-west from PRoW (Footpath GMI/13/3)</p>	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	By year 15 of operation, planting established on and around the green tunnel and around the tunnel portal will have matured, concealing this element of the Proposed Scheme. This will reduce effects to minor adverse.	The incremental growth of the proposed planting will further integrate the green tunnel and portal. Therefore, the magnitude of change is considered to be negligible and will conclude in negligible effects.
<p>o93.3.001 View north-east from PRoW (Footpath GMI/12/1)</p>	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	During year 15, a band of vegetation proposed as part of the Proposed Scheme will have established to form an effective screen, concealing the Proposed Scheme in cutting from this location. This will reduce effects to minor adverse.	The proposed planting will have further established and screen views of the Proposed Scheme in cutting, integrating with the surrounding landscape. This will result in negligible effects.

Viewpoint	Description of effect – operation year 1 (2026)		Description of effect – operation year 15 (2041)	Description of effect – operation year 60 (2086)
	Winter	Summer	summer	summer
094.2.001 View south-west from PRow (Footpath GMI/2/1) indicative of residential properties on Potter Row Road	Significantly affected: refer to Volume 2.	In the summer of year 1 operation, whilst proposed vegetation will not yet offer an effective screen, existing intervening vegetation within the properties gardens and along Potter Row will offer an element of screening of the Proposed Scheme in cutting. This will reduce the magnitude of change to low, resulting in minor adverse effects during the summer months.	By year 15 of operation, a large plot of woodland planting will have established on the periphery of the receptor, further screening views of the Proposed Scheme in cutting. The low magnitude change will result in minor adverse effects.	By year 60, the incremental growth of proposed planting will obscure views towards the Proposed Scheme. The magnitude of change will be negligible and will result in negligible adverse effects.
094.2.002 View south-west from residential properties adjacent to Potter Row Road	Significantly affected: refer to Volume 2.	During year 1 operation, mitigation planting will not have yet established, however intervening vegetation within residential gardens and hedgerows along Potter Row will offer a degree of screening. This will reduce the magnitude of change to low resulting in minor adverse effects during the summer months.	A linear belt of planting running parallel with the Proposed Scheme will have established to form an effective screen of the Proposed Scheme in cutting, thereby reducing effects to negligible.	The growth of proposed planting and existing vegetation will screen views towards the Proposed Scheme. The magnitude of change will be negligible and will result in negligible effects.
094.4.003 View east along Leather Lane	Significantly affected: refer to Volume 2.	Significantly affected: refer to Volume 2.	By year 15 of operation, a linear swathe of planting will have established to form an effective screen of the Proposed Scheme in cutting. The proposed planting along the realignment of Leather Lane will further screen views of the overbridge. The low magnitude of change assessed alongside the low sensitivity of the receptor will result in minor adverse effects.	The continued growth of the proposed planting will further integrate the scheme with the surrounding landscape. Therefore, the magnitude of change is considered to be negligible and will result in negligible effects at Year 60 operation.

Part 5 References

Buckinghamshire County Council (2001), *Landscape Plan for Buckinghamshire Part 1: Landscape Character Assessment*

Chilterns Conservation Board (2008), *'Chilterns Area of Outstanding Natural Beauty Management Plan 2008 – 2013' A Framework for Action*

Chilterns Conservation Board (2009), *The Changing Landscape of the Chilterns' Chilterns Historic Landscape Characterisation Project*

Natural England (2013), *National Character Area 110 Chilterns*. <http://publications.naturalengland.org.uk/file/5025215>; Accessed 27 September

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